
* INDIANA SINCLAIR-TIMEX NEWSLETTER *

November-December 1989

Editor-Frank Davis
Assist - M. Felerski

This issue....

Next meetings -Jan. and Feb.
Quantum Levels and Time Design Magazines and news
BYTE POWER 1ST CLASS MAGAZINE
Pixel Print Plus Version 4.0 reviewed by Mike Felerski
Oliger Disk Interface Specs w/JLO SAFE
Tricks Of The Trade by Mike Felerski
RS-232 Pin Assignments for DB25 and DB9
1990 ISTUG SURVEY

I. S. T. U. G. MEETING

The meeting for January 27 will be held at the Eagledale Public Library, meeting room, 3225 Lowery Road, Indianapolis, IN. This meeting will start at 1:30 P.M. This is one block East of Georgetown Road on 34th. For directions call Frank Davis at 317-473-8031 or Paul Holmgren at 317-291-6002.

The meeting for February 24th will be held at the Eagledale Public Library, meeting room, 3225 Lowery Road, Indianapolis, In. The meeting will start at 1:30 P.M. and run approximately 3 hours. For directions call Frank or Paul at the above given phone numbers. I am looking forward to a large turnout at both meetings.

The last two meetings found us having a new member attending, Mike Ingall. He is fairly new at computers and has been using a TS1000, and will soon be moving up to a TS2068. He has been using the database and word processing capabilities of the computer in producing religious tracks and in a research project on previously published religious reference books.

I want to also take the time to welcome another new member, one who I met when out at the Capitalfest last June in D.C., William McKelvey of Spring Heights, New Jersey. If you find that your power supply for your TS2068 does not supply enough juice to handle all of the peripherals you have hanging on it, then write to William. He sold me one at the Capitalfest and it works much better than the original that came with my TS2068. His address in case you need to contact him is William McKelvey, 744 Wall Road, Spring Lake Heights, NJ 07762.

Starting with the next issue we will be carrying a special supplement that looks to be on a quarterly basis: a newsletter by Mike Felerski (with the encouragement of Stan Lemke, Steve Spalding and Bill Ferrebee) on the subject of Desktop Publishing on the TS2068 and Spectrum. This will cover Pixel Print and The Print Factory, along with anything new that comes Mikes way.

We held our first December meeting out of 4 years, at Bill Angels house. It surprised me as we had a good turnout. Attending were: Willie and Rhonda Jones, Bill Angel, Mike Ingall, Basil Wentworth, Paul Holmgren and Frank Davis. Not a worlds record, but pretty decent for right before Christmas. Now if only we could have seen some others like Dick Evans, Ralph McCrum or even John Oliger show up at the next meeting, if only to let us know they are still there.

NEWS ON SINCLAIR MAGAZINES

By Frank Davis

Those who subscribe to SYNCWARE NEWS or to QUANTUM LEVELS should have received their last copy by now. A year ago they were \$5,000 in the red, but by selling back issues at the Capitalfest and by mail they put themselves in the position of being able to put out their last two issues. And in addition to that they will be able to give refunds on all remaining non-delivered issues. I hate to see them go...but at least they went honestly without owing anyone. That is a lot better than most got with Timex Sinclair User or Syntax, to name a few. They will be missed by many. For those who never subscribed they are still offering back issues for \$3 per issue and this includes postage and handling. This offer is good till December 31, 1990 or until they are gone. Subscribers can take a refund in back issues also, if they wish. For more info write to SWN/QL BACK ISSUES, The SyncWare News Group, 602 S. Mill St. , Louisville, OH 44641. My hat is off to Basil, Jeff and Tom.

I received Vol. 5 No. 2 of TIME DESIGNS MAGAZINE several weeks ago. It is in a smaller format , but still with the same amount of data. Still worth the price. I have been told that the next issue is ready to mail, (by Gary Ganger of Dayton , Ohio). If you have not received any issues upto this point, write to Tim Woods at Time Designs, 29722 Hult Road, Colton, Oregon, 97017 or fire up your modem to his BBS at 503-824-2658 with settings at 8/1/N 300 baud only. Leave Tim a message telling him as to when you subscribed and what issues you are missing. I have been told that his mailing list of subscribers has been corrupted and is therefore incomplete. Tim appears to making an honest effort and I will continue to support him. That means I will be renewing my subscription, as the last issue I received was the last one I was owed. Speaking of support, I am certain that Tim could use some programs, and reviews, and hardware articles to fill out future issues.

For those who subscribed to Computer Shopper to read their Timex-Sinclair column, I have only disappointment. They have discontinued covering us, as well as Commodore, Adam, TI99, and the 8-bit Ataris. They want to concentrate on IBM types, Macintosh, and some Amiga; what they call the mainstream. Well, I will not be renewing in March. They were recently bought out and moved from Florida to New York, so I had expected it. Too bad that the new owners did not read a recent back issue in which Computer Shopper listed a survey they had done in which around 19% of their readers were Sinclair users! I had bought a lot of hardware thru their pages, chips, disk drives , drive enclosures, monitors, ribbons, etc. Their ad department may wish that management had done otherwise. End of subject!

We still have UPDATE! Magazine, 1317 Stratford Ave, Panama City, FL 32404, Phone number 904-871-3556. This is put out by Bill Jones, a good programmer as well as Publisher and Editor of this magazine. He tends to ramble a bit in style when he gets to editorializing, but his mag is crammed full of programs for the TS2068, QL and Z88. Lots of tips, articles about use, and reviews. It is published quarterly for \$18 a year, and back issues are available along with disks containing all of the programs in each issue and more thrown in for good measure. It has really developed into a quality magazine, to not subscribe, as well as get all of the back issues is to do yourself a disservice. What I am saying is that it comes on time and you get more than your moneys worth.

When I plug a magazine I only give you what I see as true. If something is wrong with it I will tell you that also. Thank You.



1ST CLASS MAGAZINE

BYTE POWER is a highly sophisticated computerized magazine on cassette for the TS2068 and SINCLAIR SPECTRUM 48K.

No longer will you have to type in long, fastidious programs...JUST LOAD AND RUN!

BYTE POWER is the ultimate magazine, over 110 programs were published up to now. Most of these are in FAST MACHINE CODE! And we bring you this QUALITY programming at a very small cost:

1 issue (current or back issue).....	\$5.99 pp
6 issues (current or back issues).....	\$32.00 pp
12 issues (current or back issues).....	\$55.00 pp
1st Class Pack (6 back issues in album).....	\$37.00 + \$3.00 s/h
Demo tape/Catalog package.....	\$3.00 pp

Issues available (as of OCTOBER 1988)...

August 1986	September 1986	October 1986
November 1986	December/January 1987	February 1987
Spring 1987	Fall 1987	February 1988
May 1988	Fall 1988	

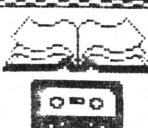
ALSO AVAILABLE FROM BYTE POWER...

Best Of Arcade Games.....	\$19.95
Best Of Entertainment, Strategy & Board Games.....	\$19.95
Best Of Business & Utilities.....	\$19.95
THE D.U.S. (Disk Utility Software) V2.0 for LKDOS.....	\$29.95
1st Class Fonts II.....	\$19.95
1st Class Programs (ZX81, TS1000, TS1500).....	\$9.95
2+FAST (fast load operating software for TS2068).....	\$19.95
The Print Factory.....	\$24.95
The Voice (speech development system).....	\$34.95
The Ultimate Disk System.....	\$289.99

U.S. FUNDS ONLY. Add \$3.00 per software and \$10.00 per disk system for shipping and handling.

BYTE POWER
1748 MEADOWVIEW AVENUE
PICKERING, ONTARIO, CANADA L1V 3G8

BYTE POWER
1748 MEADOWVIEW AVENUE
PICKERING, ONTARIO, CANADA L1V 3G8



An ISTUG Software Review

By Mike Fellerski

It is not often that I get the opportunity to review a new piece of software for the ISTUG newsletter. It always seems that everyone else gets their hands on new programs before me. But this time I have a jump on them.

As many of you have heard, Stan Lemke has placed all of his **Lemke Software Development** software packages (Pixel Print, Pixel Sketch, icons, fonts, etc.) into public domain. This was done primarily due to a lack of sales of his products in the first part of 1989. This was not because these were poor products, in fact, they are all excellent products worth twice their price. Instead, there seems to be a lack of interest in TS2068 software (could this be the end of the 2068?)

More interesting is that a new version of Pixel Print Plus! was almost completed when work was stopped, so it was never officially released. Steven Spalding of **Sting Graphics** (the man behind many of the graphic packages sold for Pixel Print) obtained a copy of the new Pixel Print version and added some some final touches making it a complete product.

Pixel Print Plus! (version 4) is a cassette based version (easily modified for disk I/O in BASIC) of Stan Lemke's Pixel Print Plus 3.1 desktop publishing program. The new version includes the following added features over version 3.x:

MOVING: The move option allows you to now use the '6' and '7' key to move instantly to the top and to the bottom of the column respectively.

PRINTING: You are now able to abort printing by pressing any key (except <ENTER>).

The print option no longer supports the TS2040 printer, but instead includes a **Greeting Card** option. A greeting card is designed using the first 45 rows of the column area for the cover and the bottom 45 rows for design of the inside of the greeting card.

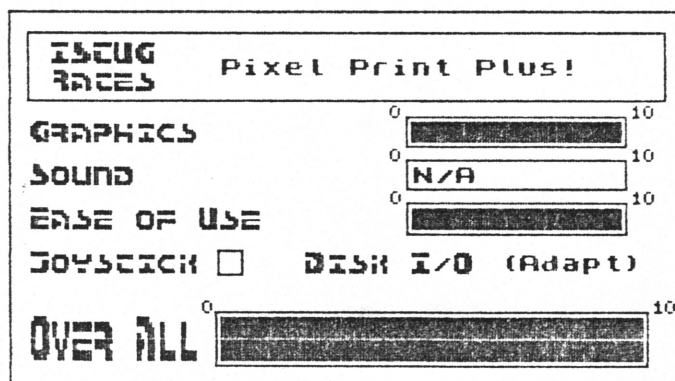
SAVE/LOAD: Steven has added the selectable Save/Load option (as seen in the Pixel Print Newsletter) and has modified it such

that the starting point for a Save or Load is at the cursor's current position. You are then prompted only to enter the number of rows down from the cursor you wish to Save. The Load option loads from the cursor position down the column.

Misc: Steven has also added lines to indicate the areas in a column where the cover and inside portion of a greeting card should be placed. Lastly, users can abort a Save/Load from the "File Name?" prompt by just hitting the <ENTER> key.

Overall I would give Pixel Print Plus! version 4 a **TEN** on a scale of one to ten. The **Greeting Card** option is a small addition that transforms an excellent program into two excellent software packages making it 500 times better than Zebra Systems' original **Greeting Card Designer**. In addition, the abort option ability when printing make Pixel Print Plus! a great poster-maker program when printing with the **Double Size** print option.

This gives us three great products from one--Pixel Print Plus! is quite the Phoenix.



(The ISTUG Rating System rates Graphics as the ability to use or the use of icons, fonts, sprites, speed with minimal or no attribute clash. The Sound rating is based on the use of BEEP, SOUND commands or none at all. Ease of Use refers to the ease at which one is able to use the software within the first hour of use including full and easy to read instructions if any. A checkmark within the joystick box reflects whether or not a joystick can or is used with the software. Disk I/O indicates Adapc, Larken, Oliver, Zebra, or Adapt for adaptable within BASIC. N/A means that this category is Not Applicable --Mike Fellerski)

OLIGER DISK I/F W/JLO SAFE SPECIFICATIONS

Number of drives supported: 1, 2, 3, or 4

Number of sides per drive: 1 or 2

Number of tracks per side: 10 - 255 allowed. Most drives allow only 40 or 80.

Amount of 2068 ram or memory space used by DOS: NONE

Booting of DOS required?: NO. SAFE is contained on an eprom in another bank.

SAVE/LOAD transfer speed: 250K bits per second (32K bytes per second)

True LOAD speed with DOS overhead: 48K bytes in aprox. 4 seconds

True SAVE speed with DOS overhead: 48K bytes in aprox. 7 seconds (Auto Verifys)

JLO SAFE V2.51 1988, J. Oliger

Formatted capacity per disk: 40 track double sided=395K
80 track double sided=795K
83 track double sided=825K
40 track single sided=195K

DISK NAME: INVOICE MASTER
FORMATTED @85 TRACKS, 2 SIDE(S)
CAPACITY: 169 CYLS/845K BYTES
FREE: 125 CYLS/625K BYTES

Maximum number of files allowed per disk: 177

Disk allocation cylinder size: 5K

Double Density: YES, always

Compatible with Spectrum mode 2068?: YES

Compatible with OS64 cartridge?: YES

Compatible with AROS cartridges?: YES

Snapshot SAVE?: YES

FILENAME	TYPE	CYLS	SIZE	START
INVOICE WR	BASIC	3	13146	1
invoice wr	BASIC	3	13140	1
VERIFY	STATE	10	49664	
ERASED?	STATE	10	49664	
spec code	BYTES	4	16384	32768
SPEC CODE	BYTES	4	16384	32768
BAD FILE	BYTES	4	16384	32768
SPEC CODE3	BYTES	4	16384	32768
VERIFYBAS	BASIC	1	436	
BASIC	BASIC	1	67	

TOTAL FILES: 10

ACTUAL EXAMPLE OF A CAT ON SYSTEM

↑ ↑ ↑

Other functions supported by snapshot SAVE button? YES. Also supports a SCREEN\$ SAVE to disk, a screen copy to the Oliger Printer Port, or a return to Basic.

Big printer support built in? YES. Supports Oliger Printer Port and some combinations of the Aerco Printer I/F used with some printers.

File types supported by DOS: ALL cassette type files are supported in all the possible combinations along with a new variables only SAVE/LOAD and total state (everything) SAVE/LOAD.

Command Syntax easy to learn? YES. SAVE/LOAD commands are EXACTLY as is required for the cassette commands but with the "/" character immediately after the SAVE or LOAD keyword. EG: SAVE /"Program" LINE 1 or LOAD /"screen" SCREEN\$

OLIGER 2068 DISK SYSTEM PRICES AND BASIC INFORMATION

```

-+-+-----+
          DISK BOARD "A"
          Bare pc only: $17.95pp
          Kit of board with parts: $55.95pp
          Assembled & tested: $66.95pp
          Two drive data cable for above, 3 foot long total: $16.95pp
          Four drive data cable for above, 4 foot long total: $26.95pp
WD1770PH-00 disk controller chip: $19.95pp (spare or replacement-limit 1 per order)
-+-+-----+

```

DISK BOARD "B" W/NMI SAVE

Bare pc with JLO SAFE Disc Basic eprom: \$26.95pp
Kit of board with parts: \$45.95pp
Assembled & tested: \$63.95pp

-+-+-+-----+

PACKAGE OF BOTH DISK BOARDS "A" & "B" W/NMI SAVE

Bare pcs only with JLO SAFE Disk Basic eprom: \$43.95pp
Kit of both boards with parts: \$99.95pp
Both boards assembled & tested: \$127.95pp
Both boards, assembled & tested w/2-drive data cable: \$139.95pp
The DiskWorks! Both bds asssd w/2-drv data cable & asssd 2068 Expansion Bd: \$189.95pp

-+-+-+-----+

-FACTS CONCERNING THE OLIGER 2068 FLOPPY DISK SYSTEM-

Both printed circuit boards feature plated through holes, no jumper wires, and all edge traces richly gold plated. The Oliger 2068 Expansion Board IS REQUIRED to connect these boards to your TS2068 computer.

The JLO SAFE (Simple And Fast Extended) Disk Basic V2 eprom supplied with the Disk "B" board was written by John Olinger for use on this system. SAVING & LOADING using JLO SAFE V2 is very straightforward, using the EXACT same syntax the regular cassette commands use, but with the character "/" following the SAVE/LOAD command. An example of SAVING a Basic program with variables would be SAVE /"FILENAME" or SAVE /"FILENAME" LINE n. JLO SAFE V2 supports ALL the various types of SAVE/LOADS supported by the cassette in ALL the regular combinations. This includes Basic programs (regular & autorun), CODE/SCREEN\$ files (LOADED with SAVED defaults to use if LOADING parameters are not specified, just as the cassette commands do), numeric arrays, character arrays (DATA), and two NEW types of files; VAL for variables SAVE/LOAD and ABS for TOTAL STATE SAVE/LOADS (IE: EVERYTHING is LOADED or SAVED!). JLO SAFE V2 supports up to 177 files per disk (plus a special file 0) and its total formatted capacity is variable depending of the type of drive used with the system. SAFE V2 can support disk track densities up to 255 tracks/double sided (if they existed now) or as small as 10 track single sided if such a small capacity drive existed. Using a 80 track double sided drive with SAFE set for 80 track/double sided, 795K of formatted disk space is free on a newly formatted disk. If you can squeeze 83 tracks out of your drive, you will end up with 825K of formatted disk space! A 40 track double sided drive will leave you 395K of free disk space at 40 tracks and a 40 track single sided drive will leave 195K of free disk space at 40 tracks.

SAVE/LOAD speed is as fast or faster than any other 2068 DOS available. SAFE V2 can SAVE/LOAD 48K in less than 4 seconds total. SAFE V2's CATalog can display every file currently stored on the disk, with the familiar "scroll?" prompt used just like is normally done with a long Basic listing.

This disk I/F w/JLO SAFE V2 is compatible with the 2068 in regular 2068 mode, Spectrum emulator/Romswitch mode, or Zebra OS64 cartridge mode. SAFE sets itself up to support any of these configurations on power up, totally transparent to the user. JLO SAFE will also work w/all AROS cartridges and has built-in software support for the Oliger 2068 Printer Port; No more loading of printer drivers! But, you CAN still use your 2040 printer as usual with SAFE V2 if desired.

Also now STANDARD on the Oliger 2068 Disk I/F is the NMI pushbutton SAVE feature, allowing the use of the Disk I/F with just about every piece of software a person could have at the press of a button. This Disk I/F w/SAFE V2 can support up to 4 double density 3", 3 1/2", or 5 1/4" drives.

In summary, the Oliger 2068 Disk I/F w/JLO SAFE V2 is very likely the fastest most user friendly disk system available for the 2068, period. It is compatible with 2068, OS68, or Spectrum modes of the 2068, and will work transparently with AROS cartridges, be the Oliger User Cartridges or Timex Command Cartridges. In my opinion, it is simply the BEST disk system available for the TS2068.

John L. Oliger

John L. Olinger



Tricks Of The Trade

Left Center Right

By Mike Feferski

Anyone who uses a wordprocessing program has done it. Greeting card programs even do it. But what if I want to do it in my own programs?

If you are not lost yet, what I am speaking of is **Left**, **Center** and **Right Justification** of text lines on a screen display or on a hardcopy printout. Left justification is when the first character of each line of text in a paragraph lines up evenly along the left margin of the screen or page. For instance, this paragraph is left justified.

This paragraph, on the other hand, is right justified, where all of the last characters in the text lines align along the right margin.

Center justification is just placing the text line, headline or paragraph in the middle of the screen or page.

The other evening I found that I needed some routines that would allow me to left, center and right justify a string (t\$) of text for display. The three routines which are discussed here accomplish this by making a copy of the text string and then placing each character back into the original string in the new format (see listing B).

```
10 REM Justify It
20 REM By Mike Feferski
30 LET max=32
40 DIM t$(max)
50 DIM o$(max)
100 GO SUB 300
110 PRINT AT 14,5;"(L)eft"
120 PRINT AT 15,5;"(C)enter"
130 PRINT AT 16,5;"(R)ight"
140 INPUT "Choice? ";c$
150 IF c$="L" THEN GOSUB 4000:
GOSUB 200: GOTO 110
160 IF c$="C" THEN GOSUB 4100:
GOSUB 200: GOTO 110
170 IF c$="R" THEN GOSUB 4200:
GOSUB 200: GOTO 110
180 GOTO 140
200 REM Clear and Print
205 CLS: PRINT AT 8,0;"0123456
78901234567890123456789012
"
210 PRINT AT 10,0;t$: RETURN
300 REM Enter String
310 PRINT AT 20,0;"Enter string
";max;" Chars Max"
320 INPUT t$: GOSUB 200:
RETURN
```

Listing A

The routines assume that the text string is stored in t\$ and that the size of both t\$ and o\$ is DIMensioned to max. o\$ is used the temporary string. Listing A is a demo/main routine that let us enter, justify and re-display it.

```
4000 REM Left Justify
4005 LET o$=t$: LET pos=0
4010 IF o$(pos+1)=CHR$ 32 THEN
LET pos=pos+1: GOTO 4010
4020 IF pos=0 THEN RETURN
4025 LET i=1
4030 FOR x=pos+1 TO max: LET
t$(i)=o$(x): LET i=i+1:
NEXT x
4040 FOR x=i TO max: LET t$(x)
=CHR$ 32: NEXT x
4050 RETURN
4100 REM Center Justify
4110 GOSUB 4000: LET o$=t$:
LET pos=max
4120 IF t$(pos)<>CHR$ 32 THEN
GOTO 4150
4130 LET pos=pos-1: IF pos=0
THEN GOTO 4150
4140 GOTO 4120
4150 LET pos=(INT((max-pos)/2)
+1
4160 FOR x=1 TO pos-1: LET t$(
x)=CHR$ 32: NEXT x
4170 LET i=1
4180 FOR x=pos TO max: LET t$(
x)=o$(i): LET i=i+1:
NEXT x
4190 RETURN
```

Listing B

Once listings A, B and C are typed in, RUN the program enter some text and then test the options to see the routines at work. If you are using ZEBRA SYSTEMS OS64 then try replacing line 30 with LET max=64. You may also replace the PRINT statement in line 210 with an LPRINT.

```
4200 REM Right Justify
4205 LET o$=t$: LET pos=max+1
4220 IF o$(pos-1)<>CHR$ 32
THEN GOTO 4230
4222 LET pos=pos-1
4225 IF pos=0 THEN RETURN
4227 GOTO 4220
4230 LET i=max
4235 FOR x=pos-1 TO 1 STEP -1
LET t$(i)=o$(x): LET i=i-
1: NEXT x
4240 FOR x=i TO 1 STEP -1: LET
t$(x)=CHR$ 32: NEXT x
4250 RETURN
```

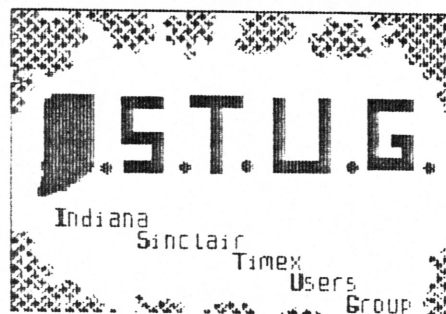
Listing C

The theory behind the routines is to find the first non-blank character in the string whose position is placed in pos. We look left to right to left justify and right to left to right justify. This is the point at which we start to pick out each character and place them from o\$ into t\$, starting at t\$(1) or t\$(max) for left or right justification respectively.

In order to center the string,

We first left justify the string using a GOSUB 4000 so there is less guess work as to where the first non blank character is. Then we count back through the string looking for the first non blank character starting from position **max**. We then take this value (**pos**) and divide it by two and add 1 (adding 1 is optional per programmer's taste). This then gives us the starting left hand position within the string. Finally, the characters are picked and placed just as in the left and right routines.

This may not be the fastest method (there is always machine code) and it may not be the most compact way to justify a string, but it is fairly universal and can be ported to TS1000's and QL's without much modification.



RS-232C PIN ASSIGNMENTS

DB25	DB9*	FUNCTION	DEFINITION	DIRECTION
1		Ground	Chassis ground	NA
2	3	Data xsfer	Transmit data	from DTE to DCE
3	2	Data xsfer	Receive data	from DCE to DTE
4	7	Control	Request to send (RTS)	from DTE to DCE
5	8	Control	Clear to send (CTS)	from DCE to DTE
6	6	Control	Data set ready (DSR)	from DCE to DTE
7	5	Ground	Signal ground	NA
8	1	Control	Data carrier detect (DCD)	from DCE to DTE
9		Test	Data set testing	NA
10		Test	Data set testing	NA
11		-	Not assigned	NA
12		Control	Secondary DCD	from DCE to DTE
13		Control	Secondary CTS	from DCE to DTE
14		Control	Secondary transmit data	from DTE to DCE
15		Timing	Transmission signal element timing	from DCE to DTE
16		Control	Secondary receive data	from DCE to DTE
17		Timing	Received signal element timing	from DCE to DTE
18		-	Not assigned	NA
19		Control	Secondary RTS	from DTE to DCE
20	4	Control	Data terminal ready (DTR)	from DTE to DCE
21		Control	Signal quality detector	from DCE to DTE
22	9	Control	Ring indicator (RI) modem only	from DCE to DTE
23		Timing	Data signal rate selector	either
24		Timing	Transmission signal element timing	from DTE to DCE
25		-	Not assigned	NA

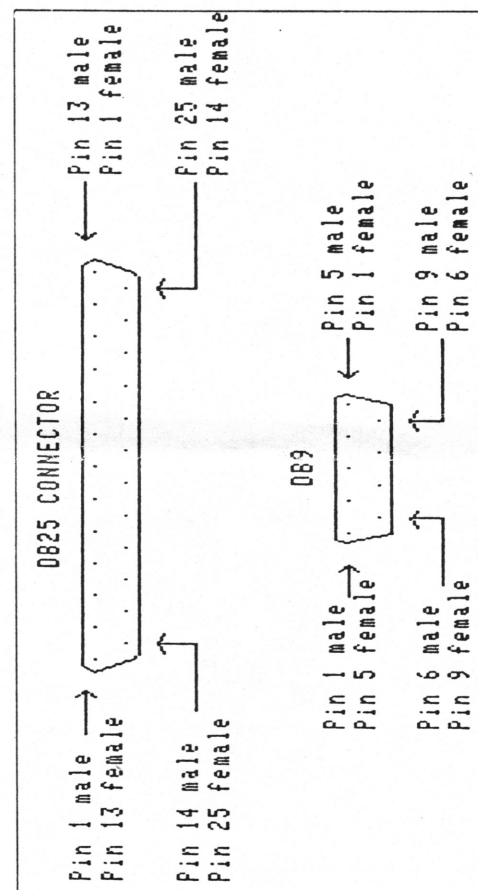
(FIGURE 2a)

MOST USED RS-232C PINS

1		Ground	Chassis ground	NA
2	3	Data xsfer	Transmit data	from DTE to DCE
3	2	Data xsfer	Receive data	from DCE to DTE
4	7	Control	Request to send (RTS)	from DTE to DCE
5	8	Control	Clear to send (CTS)	from DCE to DTE
6	6	Control	Data set ready (DSR)	from DCE to DTE
7	5	Ground	Signal ground	NA
8	1	Control	Data carrier detect (DCD)	from DCE to DTE
20	4	Control	Data terminal ready (DTR)	from DTE to DCE
22	9	Control	Ring indicator (RI) modem only	from DTE to DCE

* DB9 connector is a partial RS-232C implementation.

(FIGURE 2b)



View of DB25 and DB9 connectors looking into the mating portion of the connector.

RS-232 pin assignments for DB25 and DB9 connectors. Figure 2a is the complete list of assignments. Figure 2b is the group of pins most often used by microcomputer users.

1990 ISTUG SURVEY

We would like for all readers to please take the time to fill out this survey or a copy of it and return it as soon as possible. The results should help us to better serve you and produce meetings and a newsletter that accurately reflect what you want out of ISTUG.

(1) WHAT COMPUTERS DO YOU OWN? _____

(2) WHICH COMPUTER WOULD YOU LIKE TO SEE MORE ABOUT IN THE
ISTUG NEWSLETTER? _____

_____. 2ND CHOICE? _____

(3) WHAT TYPE OF PROGRAMS, ARTICLES, OR REVIEWS WOULD YOU
MOST LIKE TO SEE IN THE NEWSLETTER? _____

(4) WHEN IS THE MOST CONVENIENT TIME FOR YOU TO ATTEND
MEETINGS? _____

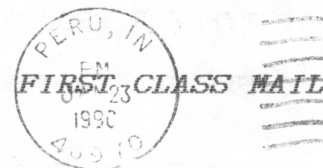
(5) WHAT WOULD YOU MOST LIKE TO SEE HAPPEN AT OUR MEETINGS AND
WHAT WOULD YOU LIKE TO CONTRIBUTE TO THEM? _____

(6) IS THERE AN AREA OF SINCLAIR COMPUTING THAT YOU ARE
UNCLEAR ABOUT THAT YOU WOULD LIKE TO SEE MORE ATTENTION ON AT
MEETINGS OR IN THE NEWSLETTER? IF SO, WHAT ARE SOME OF THESE
AREAS? _____

Please take the time to complete this survey and return it
to : ISTUG, 513 EAST MAIN ST., PERU, IN 46970.

YOUR NAME _____

I. S. T. U. G.
513 EAST MAIN STREET
PERU, IN 46970



Address correction requested:

Don Lambert
3310 Clover Drive S.W.,
Cedar Rapids, Iowa
52404

ISTUG is a not for profit, educational organization dedicated to helping users of Timex, Sinclair and Cambridge computers. We offer a hardcopy and software library for our membership along with technical assistance and monthly meetings (usually the last Saturday of the month at 1:30 P.M.). Full membership is available at \$12 per year and newsletter only subscriptions at \$9 per year. Send all inquiries, along with SASE, to ISTUG, 513 E. Main St., Peru, IN, 46970.